

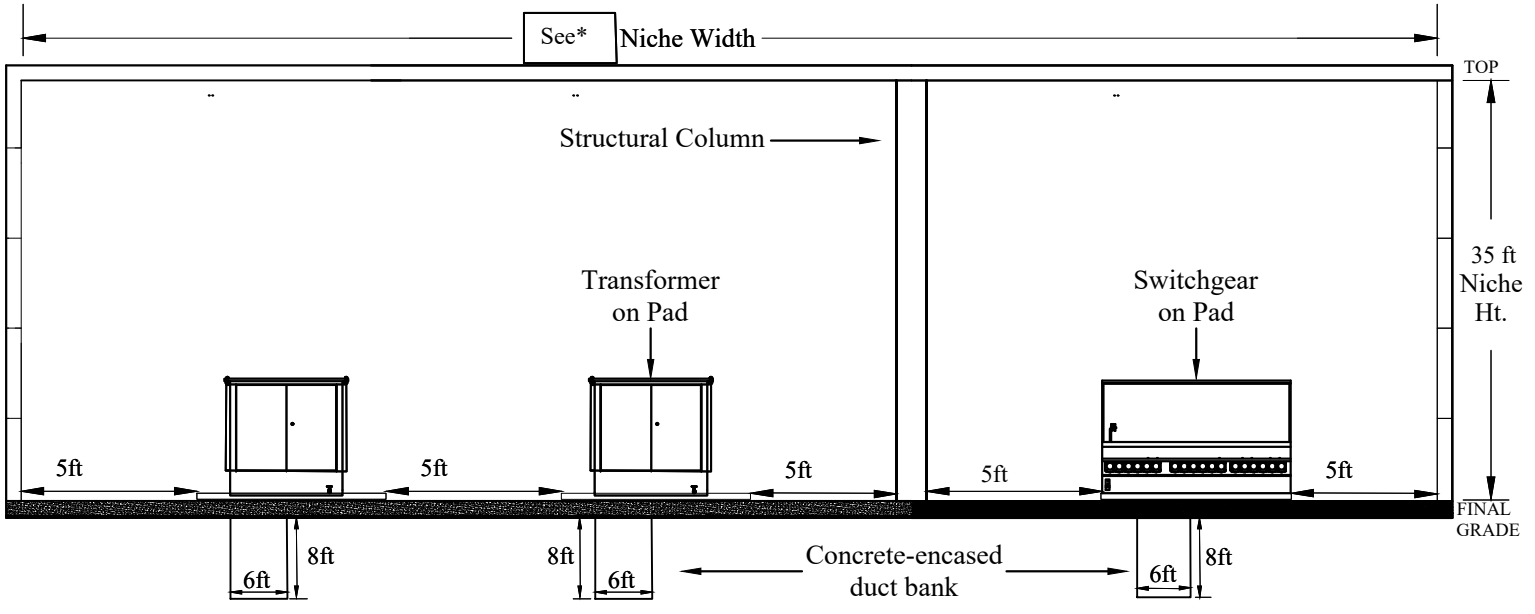
1510

TRANSFORMERS: PADMOUNT

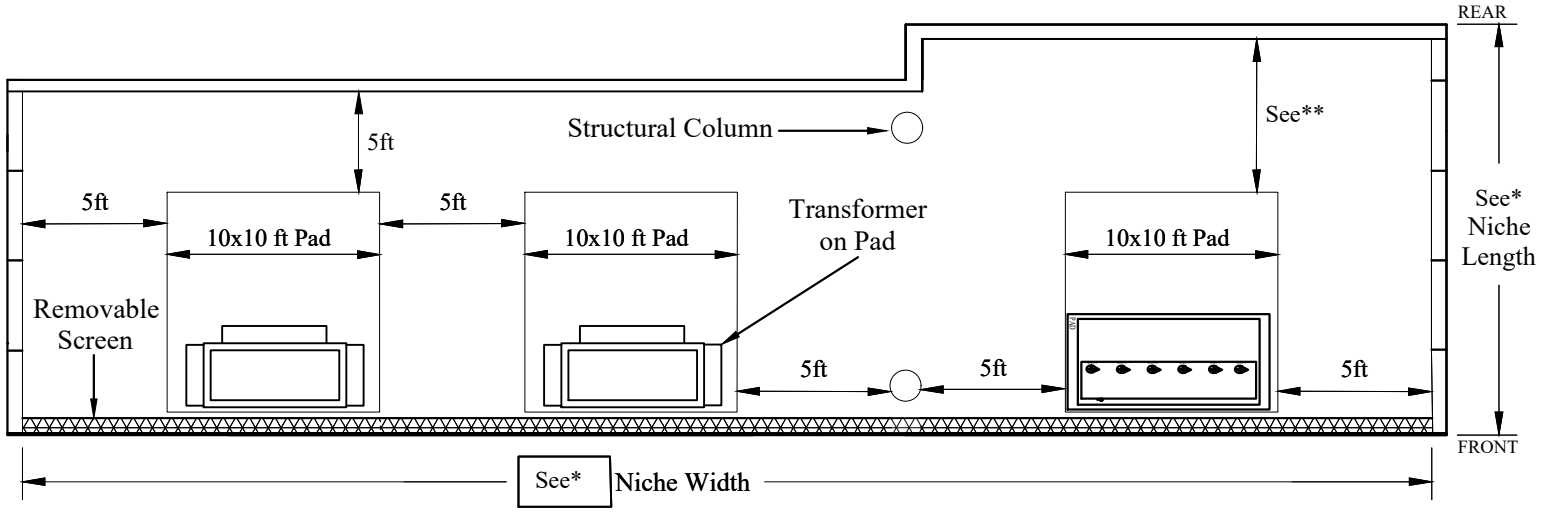
CONTAINS

- 1510-02 DISTRIBUTION NICHE**
- 1510-10 1PH XFMR 120/240V 3W**
- 1510-15 3PH XFMR 208Y/120V 4W**
- 1510-20 3PH XFMR 277/480V**
- 1510-31 1PH XFMR LOOP FEED**
- 1510-33 1PH XFMR RADIAL/OPEN LOOP FEED**
- 1510-41 3PH XFMR LOOP FEED 120/208V**
- 1510-43 3PH XFMR RADIAL/OPEN LOOP FEED 120/208V**
- 1510-51 3PH XFMR LOOP FEED 277/480V**
- 1510-53 3PH XFMR RADIAL/OPEN LOOP FEED 277/480V**

Front View



Top View



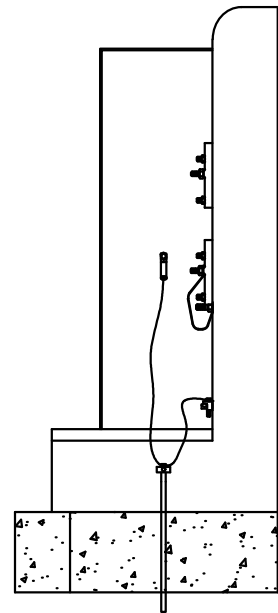
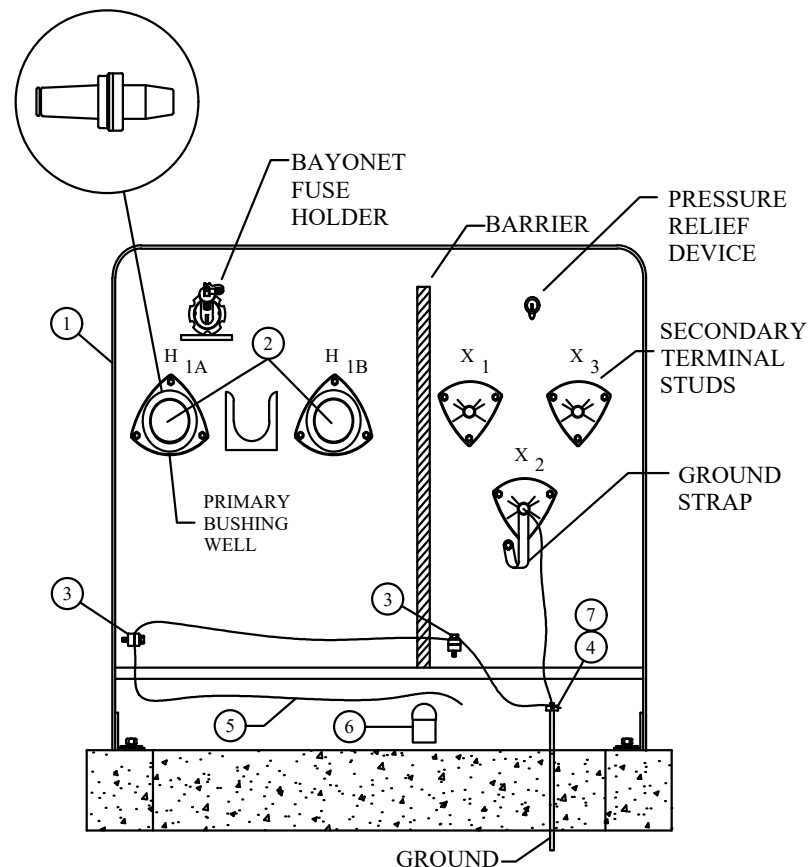
Drawing N.T.S.

1. Transformer(s)/Switchgear within the niche must face right of way (ROW) (diagram above shows orientations). All padmounted equipment must be at ground level but must be 2ft above 100 year flood plain. All concrete pads for transformer/switchgear must be align with niche entrance and not recessed in niche to maintain clearances.
2. Niche's right of way (ROW) must be free and clear to grade within 20 feet x 35 feet (this includes the vertical space of the setup area) for each of AE's padmounted equipment. No fencing trees, street furniture, awnings, balconies or objects of any kind shall be located in this area. Only the removable screen (approved by AE, Design Department) which allows air flow, shall be allowed. This area shall be able to support a total weight of 72,180 pounds with a maximum rear axle weight of 32,530 pounds. The maximum acceptable grade leading to the niche entrance is 12 percent (see Design Criteria Manual for truck accessibility guidelines).
3. Niche wall, columns and ceiling construction must be rated for 3-hour firewall on all sides. Niche ceiling height must be 35ft from concrete pad to inside ceiling. When a column will be located inside the niche for structural support, the necessary clearances must be kept for transformer and switchgear. .
4. All niche equipment must be installed on the customer's property, not in public ROW.
5. Location of the customer's meter(s) and customer's electrical equipment meter(s) must be external of the niche and must adhere to Austin Energy's metering and disconnect equipment requirements in accordance with the latest AE Design Criteria Manual.
6. Provision of legal metes and bounds of the whole niche and all other associated Austin Energy's equipment boundary description is the customer's responsibility (Contact AE, PIRES department, for details when obtaining easement).
7. Customer is responsible to provide a structural analysis sealed by a professional engineer. Analysis must state that all infrastructure beneath the transformer, pad, and conduit shall support indefinitely the weight of transformer (19,000 pounds) and all associated equipment. The customer must provide plan and profile of Austin Energy primary conduit going into the transformer/switchgear and also any building structure that will be located below our pads or equipment. This profile view must include primary and secondary conduits below transformer/switchgear pad to ensure vertical 3ft clearance is met.
8. Customer is responsible for all conduit (primary, secondary, & service) entering the building footprint.
 - o Primary conduit entering the building footprint shall have a vertical 3ft clearance measured from the conduit surface to any building structure. . In the event that the conduit is in need of repair, the owner of the building at the time of repair is required to provide access to the AE conduit by whatever means is necessary and once repairs are made, reinstall all civil work to its original integrity and specifications.
 - o Primary conduit entering the building footprint and running into the transformer pad shall be 4-4" PVC. Conduit shall be concrete-encased for any portion of the conduit that is internal to the building. Concrete-encasement external to the building shall be per the AE design.
 - o Primary conduit entering the building footprint and running into the switchgear pad shall be 5" PVC (number runs will be determine by AE design). Conduit with 90 degree bend shall have 24" min. radius and conduit bend shall be completely concrete encased. Bell ends shall be 1" above the slab.
 - o Secondary runs from transformer will run behind pad and shall not cross the primary conduit. Customer must sweep all secondary conduit spares into the metering/electrical room (if present).
9. Equipment in niche must adhere to all other applicable requirements as detailed in the Austin Energy Design Criteria Manual, Austin Energy Civil Specifications, or as indicated by the Austin Energy Design Department

*Niche Length and Width will be determined by padmounted equipment size and clearance(s)
 **Clearance shall be 10ft however when the hotstick operation side is facing the interior of the Niche, clearance increase to 15ft.

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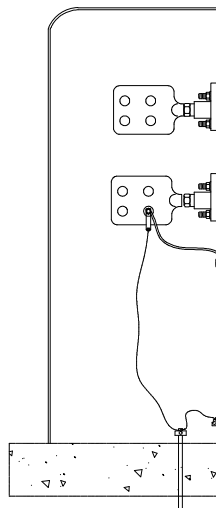
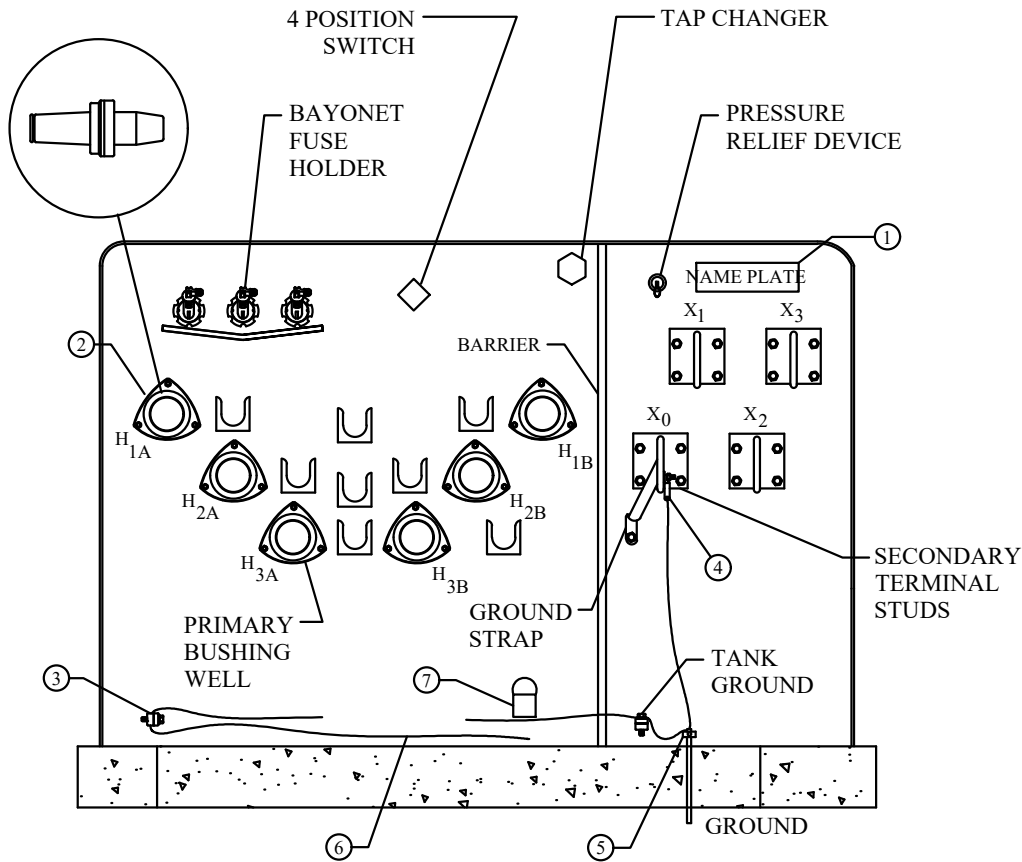
SIDE VIEW

- 1510-10-01
- 1510-10-03
- 1510-10-04
- 1510-10-05
- 1510-10-07
- 1510-10-09

CU-REF	CU-ID	CU-DESCRIPTION
15101001	XFMRPMP1PH120/240-25KVA	XFMR PAD MOUNT 1PH 120/240 25 KVA
15101003	XFMRPMP1PH120/240-50KVA	XFMR PAD MOUNT 1PH 120/240 50 KVA
15101004	XFMRPMP1PH120/240-75KVA	XFMR PAD MOUNT 1PH 120/240 75 KVA
15101005	XFMRPMP1PH120/240-100KVA	XFMR PAD MOUNT 1PH 120/240 100 KVA
15101007	XFMRPMP1PH120/240-167KVA	XFMR PAD MOUNT 1PH 120/240 167 KVA
15101009	XFMRPMP1PH120/240-250KVA	XFMR PAD MOUNT 1PH 120/240 250 KVA

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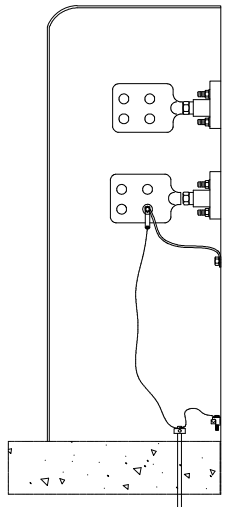
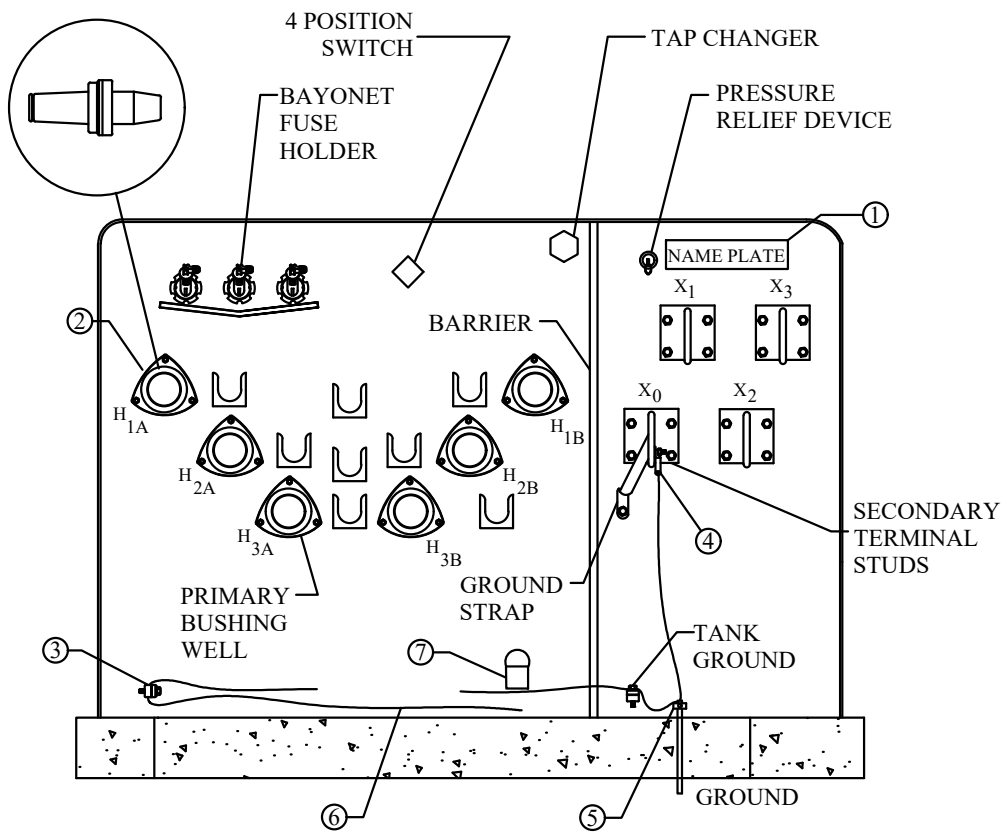
SIDE VIEW

- 1510-15-01
- 1510-15-03
- 1510-15-05
- 1510-15-07
- 1510-15-10
- 1510-15-15

CU-REF	CU-ID	CU-DESCRIPTION
15101501	XFMRPM3PH120/208-75KVA	XFMR PAD MOUNT 3PH 120/208 75 KVA
15101503	XFMRPM3PH120/208-150KVA	XFMR PAD MOUNT 3PH 120/208 150 KVA
15101505	XFMRPM3PH120/208-225KVA	XFMR PAD MOUNT 3PH 120/208 225 KVA
15101507	XFMRPM3PH120/208-300KVA	XFMR PAD MOUNT 3PH 120/208 300 KVA
15101510	XFMRPM3PH120/208-500KVA	XFMR PAD MOUNT 3PH 120/208 500 KVA
15101515	XFMRPM3PH120/208-750KVA	XFMR PAD MOUNT 3PH 120/208 750 KVA

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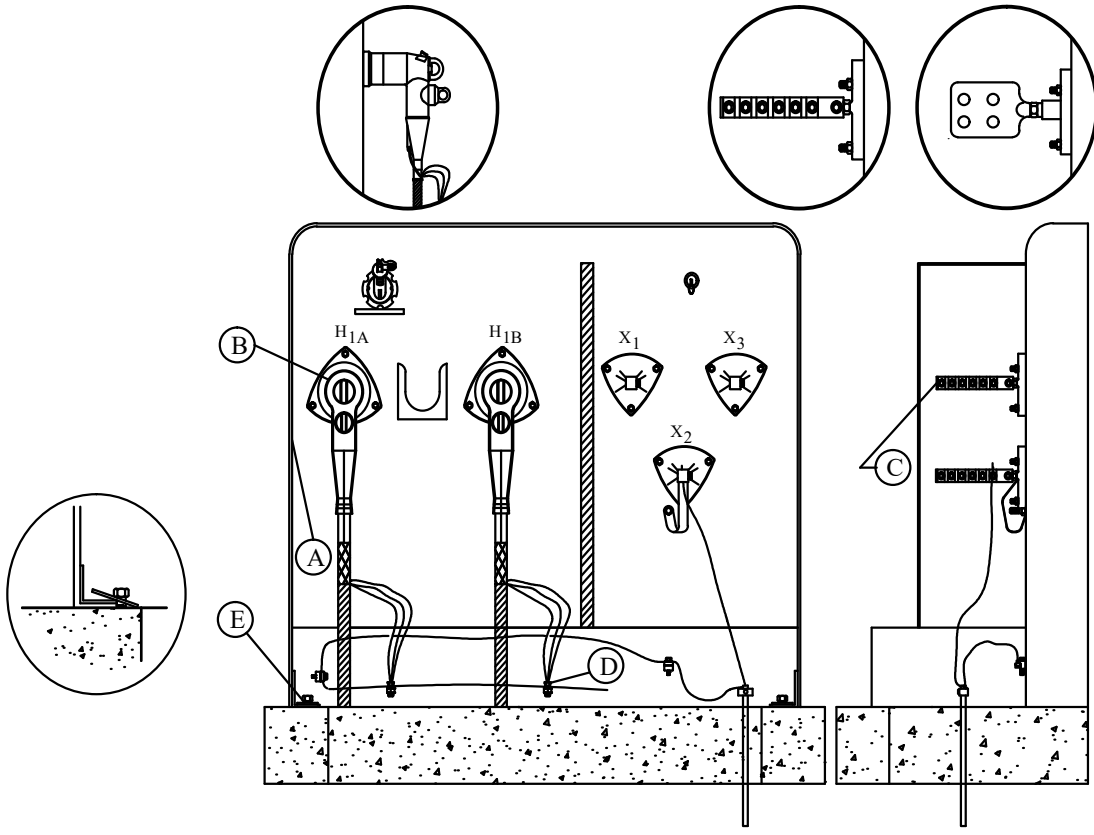


SIDE VIEW

- | | |
|------------|------------|
| 1510-20-01 | 1510-20-15 |
| 1510-20-03 | 1510-20-20 |
| 1510-20-05 | 1510-20-25 |
| 1510-20-07 | 1510-20-30 |
| 1510-20-10 | 1510-20-35 |

CU-REF	CU-ID	CU-DESCRIPTION
15102001	XFMRPM3PH277/480-75KVA	XFMR PAD MOUNT 3PH 277/480 75 KVA
15102003	XFMRPM3PH277/480-150KVA	XFMR PAD MOUNT 3PH 277/480 150 KVA
15102005	XFMRPM3PH277/480-225KVA	XFMR PAD MOUNT 3PH 277/480 225 KVA
15102007	XFMRPM3PH277/480-300KVA	XFMR PAD MOUNT 3PH 277/480 300 KVA
15102010	XFMRPM3PH277/480-500KVA	XFMR PAD MOUNT 3PH 277/480 500 KVA
15102015	XFMRPM3PH277/480-750KVA	XFMR PAD MOUNT 3PH 277/480 750 KVA
15102020	XFMRPM3PH277/480-1000KVA	XFMR PAD MOUNT 3PH 277/480 1000 KVA
15102025	XFMRPM3PH277/480-1500KVA	XFMR PAD MOUNT 3PH 277/480 1500 KVA
15102030	XFMRPM3PH277/480-2000KVA	XFMR PAD MOUNT 3PH 277/480 2000 KVA
15102035	XFMRPM3PH277/480-2500KVA	XFMR PAD MOUNT 3PH 277/480 2500 KVA

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CREWS WILL REPLACE WITH QUICK-LUG ADAPTORS ON SECONDARY-SIDE

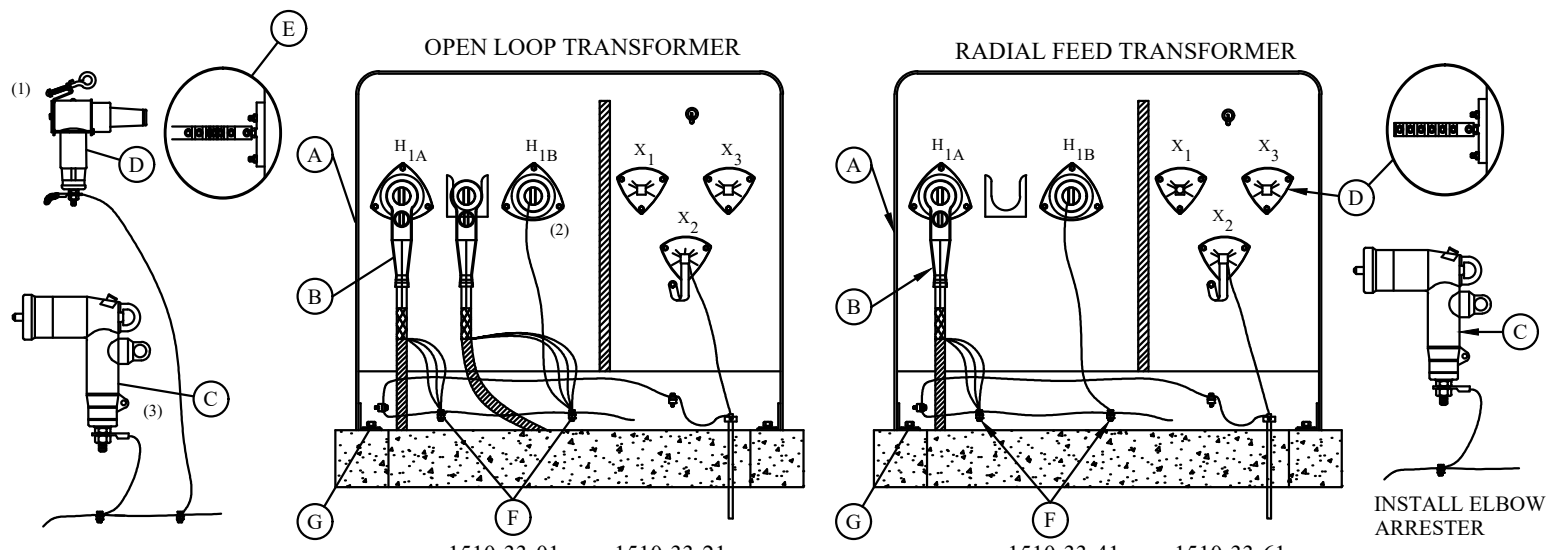
RESIDENTIAL	COMMERCIAL
1510-31-01	1510-31-21
1510-31-03	1510-31-23
1510-31-04	1510-31-24
1510-31-05	1510-31-25
1510-31-07	1510-31-27
1510-31-09	1510-31-29

- * ALLOW SUFFICIENT LENGTH OF CONCENTRIC NEUTRAL WIRES AND ARRESTER GROUND LEAD TO ENSURE FREE MOVEMENT OF ELBOWS DURING HOT STICK OPERATIONS.
- * GROUND DRAIN WIRES FROM BUSHING TERMINATIONS PER MANUFACTURER'S INSTRUCTIONS TO AVOID DANGEROUS VOLTAGE LEVELS ON THE SURFACE OF DEAD-FRONT EQUIPMENT.
- * PROTECTION. TRANSFORMER PROTECTION IS ACCOMPLISHED THROUGH A SERIES-CONNECTED, TWO FUSE SYSTEM. A FIELD-REPLACEABLE BAY-O-NET FUSE IS SPECIFIED ALONG WITH AN UNDER-OIL CURRENT LIMITING FUSE (CLF) FOR ALL 1PH TRANSFORMERS. BAY-O-NET FUSES ARE DESIGNED TO PROTECT THE TRANSFORMER FROM SECONDARY FAULTS WHILE THE CLF IS DESIGNED TO ISOLATE THE TRANSFORMER IN CASE OF A TRANSFORMER FAILURE. IF THE CLF OPERATES, THE TRANSFORMER IS CHANGED OUT.
- * TRANSFORMER SIZES. FOR INITIAL INSTALLATIONS, USE ONLY 25KVA, 50KVA, AND 75KVA TRANSFORMERS IN NORMAL URD INSTALLATIONS. USE THE LARGER TRANSFORMER (100KVA AND 167KVA) ON SOME LARGE 1PH COMMERCIAL INSTALLATIONS AND FOR UPGRADES IN EXISTING URD INSTALLATIONS. DO NOT USE A 250KVA FOR INITIAL INSTALLATIONS; IT IS ONLY USED FOR REPLACEMENT OF EXISTING HEAVILY LOADED 167KVA TRANSFORMERS.
- * LOCATION. DESIGN INSTALLATIONS AND LOCATE ALL TRANSFORMERS IN AREAS ACCESSIBLE BY TRUCKS. IN RESIDENTIAL INSTALLATIONS, LOCATE TRANSFORMERS ADJACENT TO THE FRONT PROPERTY LINES, EITHER IN THE RIGHT-OF-WAY OR IN A PUBLIC UTILITY EASEMENT ADJACENT TO THE RIGHT-OF-WAY.

MU-REF	MU-ID	MU-DESCRIPTION
15103101	XFMRPM1PH120/240-25-LFR	XFMR PM 1PH 120/240 25KVA LP FD RES
15103103	XFMRPM1PH120/240-50-LFR	XFMR PM 1PH 120/240 50KVA LP FD RES
15103104	XFMRPM1PH120/240-75-LFR	XFMR PM 1PH 120/240 75KVA LP FD RES
15103105	XFMRPM1PH120/240-100-LFR	XFMR PM 1PH 120/240 100KVA LP FD RES
15103107	XFMRPM1PH120/240-167-LFR	XFMR PM 1PH 120/240 167KVA LP FD RES
15103109	XFMRPM1PH120/240-250-LFR	XFMR PM 1PH 120/240 250KVA LP FD RES
15103121	XFMRPM1PH120/240-25-LFC	XFMR PM 1PH 120/240 25KVA LP FD COM
15103123	XFMRPM1PH120/240-50-LFC	XFMR PM 1PH 120/240 50KVA LP FD COM
15103124	XFMRPM1PH120/240-75-LFC	XFMR PM 1PH 120/240 75KVA LP FD COM
15103125	XFMRPM1PH120/240-100-LFC	XFMR PM 1PH 120/240 100KVA LP FD COM
15103127	XFMRPM1PH120/240-167-LFC	XFMR PM 1PH 120/240 167KVA LP FD COM
15103129	XFMRPM1PH120/240-250-LFC	XFMR PM 1PH 120/240 250KVA LP FD COM

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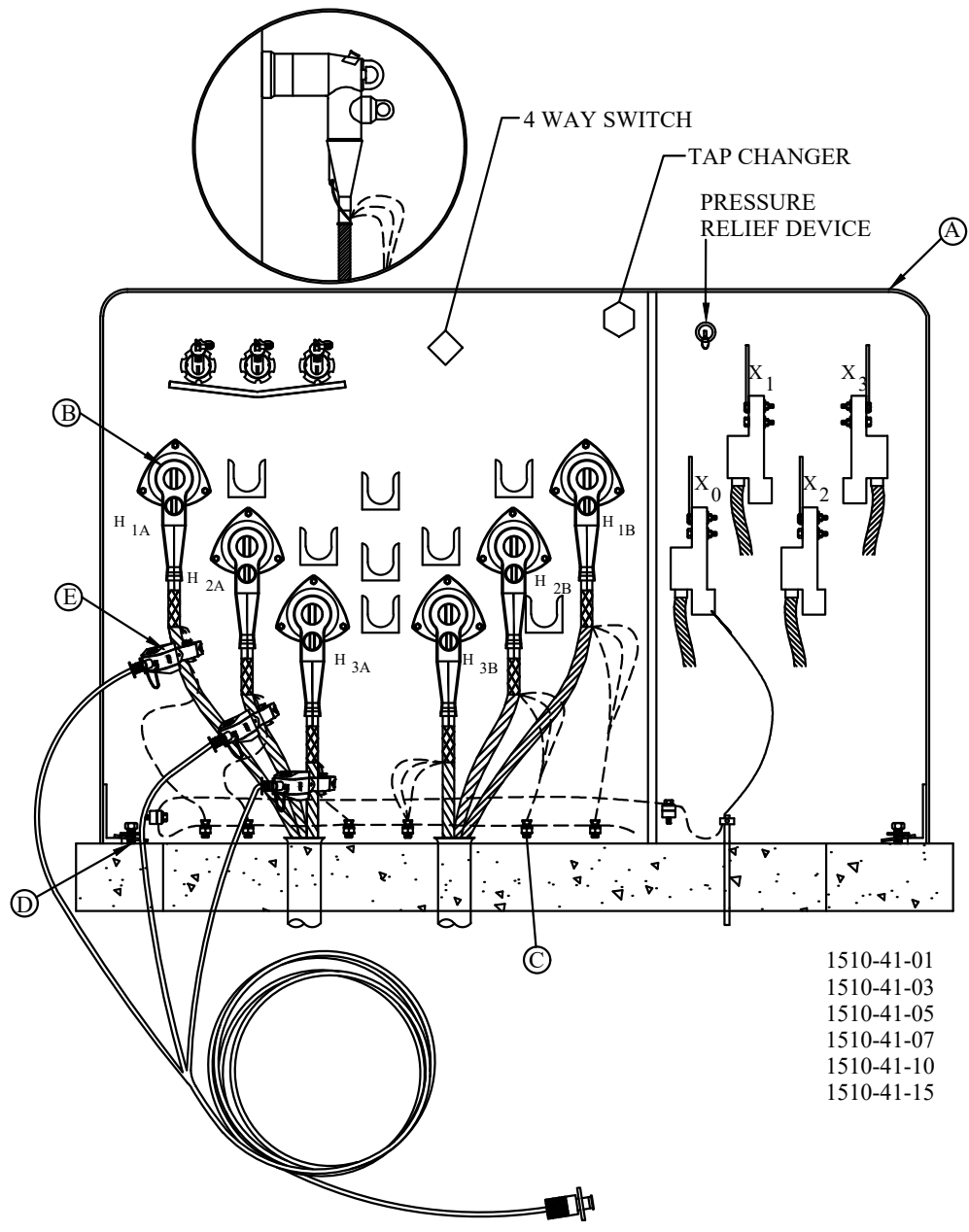


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1510-33-03	1510-33-23	1510-33-43	1510-33-63
1510-33-04	1510-33-24	1510-33-44	1510-33-64
1510-33-05	1510-33-25	1510-33-45	1510-33-65
1510-33-07	1510-33-27	1510-33-47	1510-33-67
1510-33-09	1510-33-29	1510-33-49	1510-33-67
RESIDENTIAL	COMMERCIAL	RESIDENTIAL	COMMERCIAL

1. INSTALL ARRESTER PARKING STAND.
2. MOVE ELBOW TO ARRESTER PARKING STAND.
3. INSTALL ELBOW ARRESTER TO OPEN BUSHING.

MU-REF	MU-ID	MU-DESCRIPTION
15103301	XFMRPMP1PH120/240-25-OLR	XFMR PM 1PH 120/240 25KVA OP LP RES
15103303	XFMRPMP1PH120/240-50-OLR	XFMR PM 1PH 120/240 50KVA OP LP RES
15103304	XFMRPMP1PH120/240-75-OLR	XFMR PM 1PH 120/240 75KVA OP LP RES
15103305	XFMRPMP1PH120/240-100-OLR	XFMR PM 1PH 120/240 100KVA OP LP RES
15103307	XFMRPMP1PH120/240-167-OLR	XFMR PM 1PH 120/240 167KVA OP LP RES
15103309	XFMRPMP1PH120/240-250-OLR	XFMR PM 1PH 120/240 250KVA OP LP RES
15103321	XFMRPMP1PH120/240-25-OLC	XFMR PM 1PH 120/240 25KVA OP LP COM
15103323	XFMRPMP1PH120/240-50-OLC	XFMR PM 1PH 120/240 50KVA OP LP COM
15103324	XFMRPMP1PH120/240-75-OLC	XFMR PM 1PH 120/240 75KVA OP LP COM
15103325	XFMRPMP1PH120/240-100-OLC	XFMR PM 1PH 120/240 100KVA OP LP COM
15103327	XFMRPMP1PH120/240-167-OLC	XFMR PM 1PH 120/240 167KVA OP LP COM
15103329	XFMRPMP1PH120/240-250-OLC	XFMR PM 1PH 120/240 250KVA OP LP COM
15103341	XFMRPMP1PH120/240-25-RFR	XFMR PM 1PH 120/240 25KVA RD FD RES
15103343	XFMRPMP1PH120/240-50-RFR	XFMR PM 1PH 120/240 50KVA RD FD RES
15103344	XFMRPMP1PH120/240-75-RFR	XFMR PM 1PH 120/240 75KVA RD FD RES
15103345	XFMRPMP1PH120/240-100-RFR	XFMR PM 1PH 120/240 100KVA RD FD RES
15103347	XFMRPMP1PH120/240-167-RFR	XFMR PM 1PH 120/240 167KVA RD FD RES
15103349	XFMRPMP1PH120/240-250-RFR	XFMR PM 1PH 120/240 250KVA RD FD RES
15103361	XFMRPMP1PH120/240-25-RFC	XFMR PM 1PH 120/240 25KVA RD FD COM
15103363	XFMRPMP1PH120/240-50-RFC	XFMR PM 1PH 120/240 50KVA RD FD COM
15103364	XFMRPMP1PH120/240-75-RFC	XFMR PM 1PH 120/240 75KVA RD FD COM
15103365	XFMRPMP1PH120/240-100-RFC	XFMR PM 1PH 120/240 100KVA RD FD COM
15103367	XFMRPMP1PH120/240-167-RFC	XFMR PM 1PH 120/240 167KVA RD FD COM
15103369	XFMRPMP1PH120/240-250-RFC	XFMR PM 1PH 120/240 250KVA RD FD COM

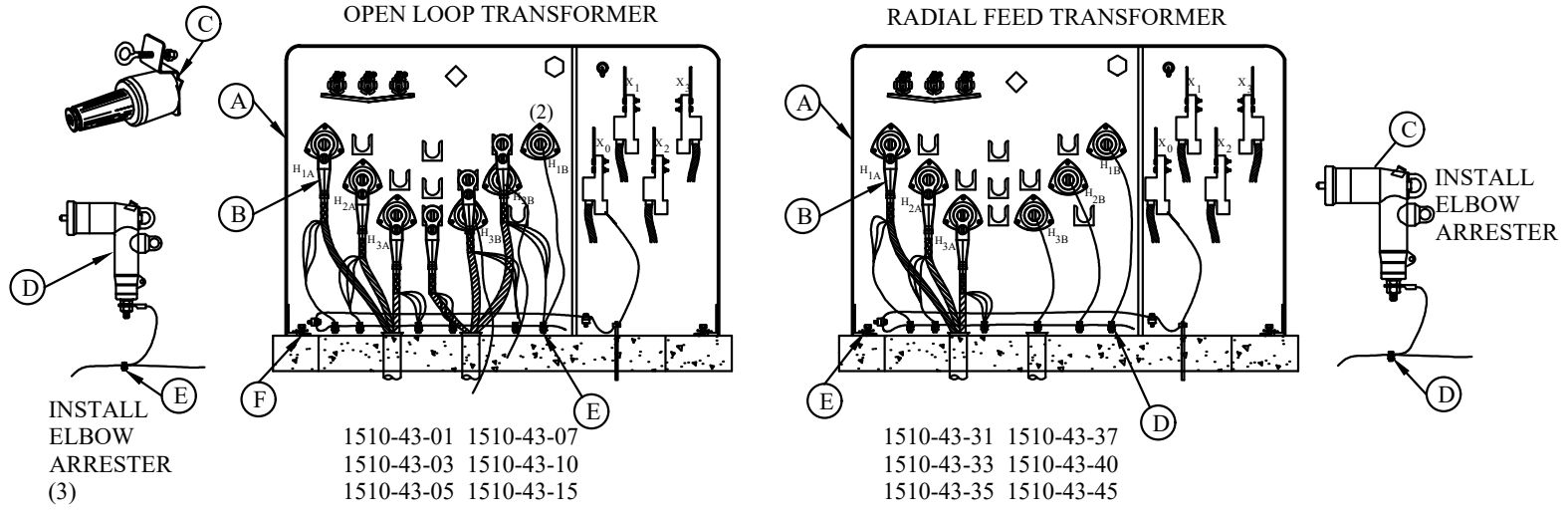
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- 1510-41-01
- 1510-41-03
- 1510-41-05
- 1510-41-07
- 1510-41-10
- 1510-41-15

MU-REF	MU-ID	MU-DESCRIPTION
15104101	XFMRPM3PH120/208-75-LF	XFMR PM 3 PH 120/208 75KVA LP FD
15104103	XFMRPM3PH120/208-150-LF	XFMR PM 3 PH 120/208 150KVA LP FD
15104105	XFMRPM3PH120/208-225-LF	XFMR PM 3 PH 120/208 225KVA LP FD
15104107	XFMRPM3PH120/208-300-LF	XFMR PM 3 PH 120/208 300KVA LP FD
15104110	XFMRPM3PH120/208-500-LF	XFMR PM 3 PH 120/208 500KVA LP FD
15104115	XFMRPM3PH120/208-750-LF	XFMR PM 3 PH 120/208 750KVA LP FD

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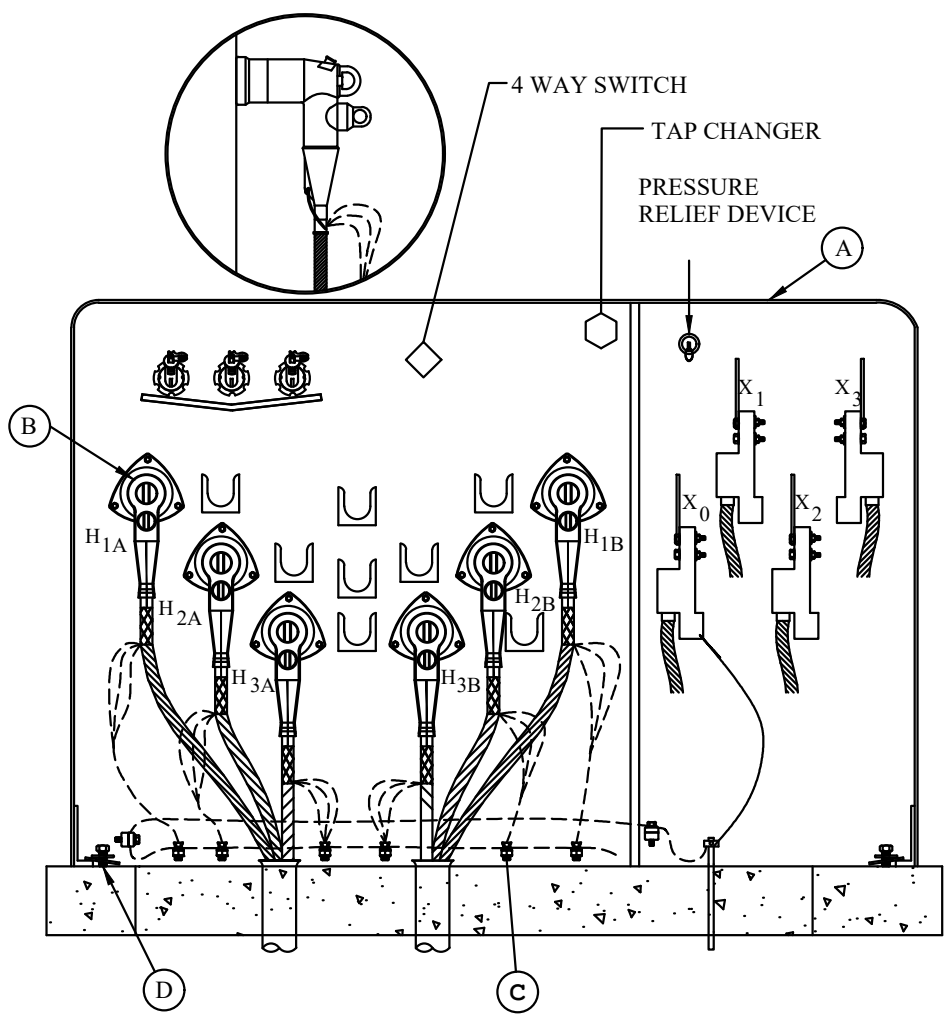
1. INSTALL INSULATOR STANDOFF IN TRANSFORMERS.
2. PARK 1 SET OF CABLES ON INSULATOR STANDOFF.
3. INSTALL ELBOW ARRESTORS ON OPEN BUSHINGS.

ALLOW SUFFICIENT LENGTH OF CONCENTRIC NEUTRAL WIRES AND ARRESTOR GROUND LEAD TO ENSURE FREE MOVEMENT OF ELBOWS DURING HOT-STICK OPERATIONS.

GROUND DRAIN WIRES FROM BUSHING TERMINATIONS PER MANUFACTURER'S INSTRUCTIONS TO AVOID DANGEROUS VOLTAGE LEVELS ON THE SURFACE OF DEAD-FRONT EQUIPMENT.

MU-REF	MU-ID	MU-DESCRIPTION
15104301	XFMRPM3PH120/208-75-OL	XFMR PM 3PH 120/208 75KVA OL
15104303	XFMRPM3PH120/208-150-OL	XFMR PM 3PH 120/208 150KVA OL
15104305	XFMRPM3PH120/208-225-OL	XFMR PM 3PH 120/208 225KVA OL
15104307	XFMRPM3PH120/208-300-OL	XFMR PM 3PH 120/208 300KVA OL
15104310	XFMRPM3PH120/208-500-OL	XFMR PM 3PH 120/208 500KVA OL
15104315	XFMRPM3PH120/208-750-OL	XFMR PM 3PH 120/208 750KVA OL
15104331	XFMRPM3PH120/208-75-RF	XFMR PM 3PH 120/208 75 KVA RF
15104333	XFMRPM3PH120/208-150-RF	XFMR PM 3PH 120/208 150KVA RF
15104335	XFMRPM3PH120/208-225-RF	XFMR PM 3PH 120/208 225KVA RF
15104337	XFMRPM3PH120/208-300-RF	XFMR PM 3PH 120/208 300KVA RF
15104340	XFMRPM3PH120/208-500-RF	XFMR PM 3 PH 120/208 500KVA RF
15104345	XFMRPM3PH120/208-750-RF	XFMR PM 3PH 120/208 750KVA RF

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- 1510-51-01 1510-51-15
- 1510-51-03 1510-51-20
- 1510-51-05 1510-51-25
- 1510-51-07 1510-51-30
- 1510-51-10 1510-51-35

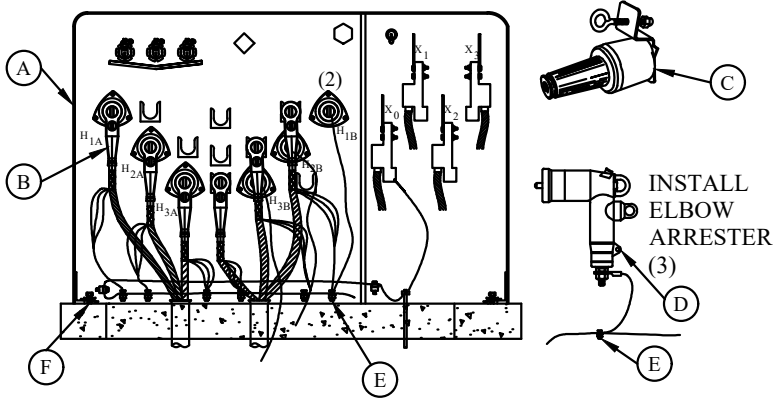
INSTALL ELBOW SURGE ARRESTERS ON THE FOLLOWING AS SHOWN ON PAGE 1544-30.

1. THE LAST TRANSFORMER IN A RADIAL MULTIPLE TRANSFORMER CIRCUIT SERVING COMMERCIAL LOADS
2. ALL OPEN POINT 3PH TRANSFORMERS IN LOOP FEED CIRCUIT.

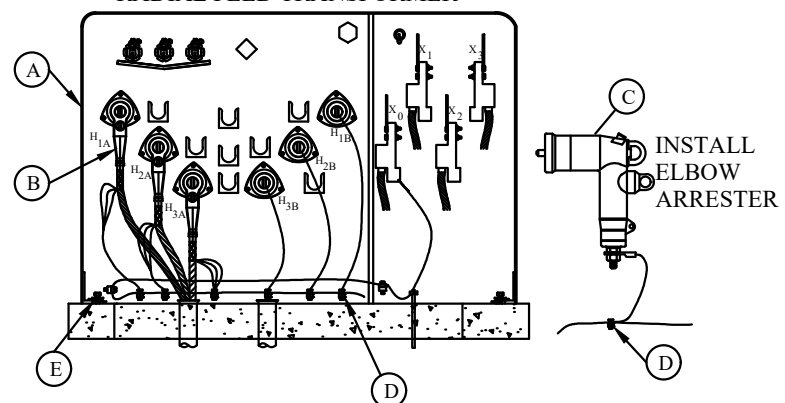
ALLOW SUFFICIENT LENGTH OF CONCENTRIC NEUTRAL WIRES AND ARRESTER GROUND LEAD TO ENSURE FREE MOVEMENT OF ELBOWS DURING HOT-STICK OPERATIONS.

MU-REF	MU-ID	MU-DESCRIPTION
15105101	XFMRPM3PH277/480-75-LF	XFMR PM 3PH 277/480 75KVA LP FD
15105103	XFMRPM3PH277/480-150-LF	XFMR PM 3PH 277/480 150KVA LP FD
15105105	XFMRPM3PH277/480-225-LF	XFMR PM 3PH 277/480 225KVA LP FD
15105107	XFMRPM3PH277/480-300-LF	XFMR PM 3PH 277/480 300KVA LP FD
15105110	XFMRPM3PH277/480-500-LF	XFMR PM 3PH 277/480 500KVA LP FD
15105115	XFMRPM3PH277/480-750-LF	XFMR PM 3PH 277/480 750KVA LP FD
15105120	XFMRPM3PH277/480-1000-LF	XFMR PM 3PH 277/480 1000KVA LP FD
15105125	XFMRPM3PH277/480-1500-LF	XFMR PM 3PH 277/480 1500KVA LP FD
15105130	XFMRPM3PH277/480-2000-LF	XFMR PM 3PH 277/480 2000KVA LP FD
15105135	XFMRPM3PH277/480-2500-LF	XFMR PM 3PH 277/480 2500KVA LP FD

OPEN LOOP TRANSFORMER



RADIAL FEED TRANSFORMER



- 1510-53-01 1510-53-15
- 1510-53-03 1510-53-20
- 1510-53-05 1510-53-25
- 1510-53-07 1510-53-30
- 1510-53-10 1510-53-35

- 1510-53-51 1510-53-65
- 1510-53-53 1510-53-70
- 1510-53-55 1510-53-75
- 1510-53-57 1510-53-80
- 1510-53-60 1510-53-85

1. INSTALL INSULATOR STANDOFF IN TRANSFORMERS.
2. PARK 1 SET OF CABLES ON INSULATOR STANDOFF.
3. INSTALL ELBOW ARRESTORS ON OPEN BUSHINGS.

ALLOW SUFFICIENT LENGTH OF CONCENTRIC NEUTRAL WIRES AND ARRESTOR GROUND LEAD TO ENSURE FREE MOVEMENT OF ELBOWS DURING HOT-STICK OPERATIONS.

GROUND DRAIN WIRES FROM BUSHING TERMINATIONS PER MANUFACTURER'S INSTRUCTIONS TO AVOID DANGEROUS VOLTAGE LEVELS ON THE SURFACE OF DEAD-FRONT EQUIPMENT.

MU-REF	MU-ID	MU-DESCRIPTION
15105301	XFMRPM3PH277/480-75-OL	XFMR PM 3PH 277/480 75KVA OP LP
15105303	XFMRPM3PH277/480-150-OL	XFMR PM 3PH 277/480 150KVA OP LP
15105305	XFMRPM3PH277/480-225-OL	XFMR PM 3PH 277/480 225KVA OP LP
15105307	XFMRPM3PH277/480-300-OL	XFMR PM 3PH 277/480 300KVA OP LP
15105310	XFMRPM3PH277/480-500-OL	XFMR PM 3PH 277/480 500KVA OP LP
15105315	XFMRPM3PH277/480-750-OL	XFMR PM 3PH 277/480 750KVA OP LP
15105320	XFMRPM3PH277/480-1000-OL	XFMR PM 3PH 277/480 1000KVA OP LP
15105325	XFMRPM3PH277/480-1500-OL	XFMR PM 3PH 277/480 1500KVA OP LP
15105330	XFMRPM3PH277/480-2000-OL	XFMR PM 3PH 277/480 2000KVA OP LP
15105335	XFMRPM3PH277/480-2500-OL	XFMR PM 3PH 277/480 2500KVA OP LP
15105351	XFMRPM3PH277/480-75-RF	XFMR PM 3PH 277/480 75KVA RF
15105353	XFMRPM3PH277/480-150-RF	XFMR PM 3PH 277/480 150KVA RF
15105355	XFMRPM3PH277/480-225-RF	XFMR PM 3PH 277/480 225KVA RF
15105357	XFMRPM3PH277/480-300-RF	XFMR PM 3PH 277/480 300KVA RF
15105360	XFMRPM3PH277/480-500-RF	XFMR PM 3PH 277/480 500KVA RF
15105365	XFMRPM3PH277/480-750-RF	XFMR PM 3PH 277/480 750KVA RF
15105370	XFMRPM3PH277/480-1000-RF	XFMR PM 3PH 277/480 1000KVA RF
15105375	XFMRPM3PH277/480-1500-RF	XFMR PM 3PH 277/480 1500KVA RF
15105380	XFMRPM3PH277/480-2000-RF	XFMR PM 3PH 277/480 2000KVA RF
15105385	XFMRPM3PH277/480-2500-RF	XFMR PM 3PH 277/480 2500KVA RF